

ABSTRACT

A search key construction system including search key sections, each coupled to an output of a first multiplexer having a first programmable control, a second multiplexer having a second programmable control and an output coupled to the first multiplexer, and a third multiplexer having a third programmable control and an output coupled to the first multiplexer is disclosed. The first programmable control can include a key source select to enable one of a first type path, a second type path, and a third type path. The first type path can include a designated section position from a packet header, the second type path can include a short field from a packet attribute, and the third type field can include a long field from a packet header.